

## Claims

We claim:

- 5 1. A voltage-controlled oscillator circuitry, comprising:  
a variable capacitor circuitry, the variable capacitor circuitry configured to adjust the  
frequency of an output signal of the voltage-controlled oscillator circuitry in  
response to a plurality of control signals; and  
a control circuitry, the control circuitry configured to generate the plurality of control  
10 signals in response to an input control signal,  
wherein the voltage level of each of the plurality of the control signals differs by an offset  
voltage from the voltage level of the remaining signals in the plurality of signals.
- 15 2. A radio-frequency (RF) apparatus, comprising:  
a first circuit partition, comprising receiver analog circuitry configured to produce a  
digital receive signal from an analog radio-frequency signal; and  
a second circuit partition, comprising receiver digital circuitry configured to accept the  
digital receive signal, wherein the first and second circuit partitions are partitioned  
so that interference effects between the first circuit partition and the second circuit  
20 partition tend to be reduced.